

SEQUENCE LISTING

<110> Guy, Charles L.
Kaplan, Fatma
Sung, Dong Yul

<120> Materials and Methods for Providing Plants with Increased Resistance to Environmental Stress

<130> UF-326XC1

<150> US 60/390,384
<151> 2002-06-21

<160> .32

<170> PatentIn version 3.2

<210> 1
<211> 18
<212> DNA
<213> Artificial sequence

<220>
<223> oligonucleotide

<400> 1
acgccccaga atacaatg

18

<210> 2
<211> 18
<212> DNA
<213> Artificial sequence

<220>
<223> oligonucleotide

<400> 2
caacggcaca atctcatg

18

<210> 3
<211> 16
<212> DNA
<213> Artificial sequence

<220>
<223> oligonucleotide

<400> 3
gacaccagg tcaaaa

16

<210> 4
<211> 18
<212> DNA
<213> Artificial sequence

<220>
<223> oligonucleotide

<400> 4
ctcaacttct tccccaca

18

<210> 5
<211> 18
<212> DNA
<213> Artificial sequence

<220>
<223> oligonucleotide

<400> 5
ggaacaagcg gacctcat

18

<210> 6
<211> 18
<212> DNA
<213> Artificial sequence

<220>
<223> oligonucleotide

<400> 6
tctcagcgat cttgcctt

18

<210> 7
<211> 18
<212> DNA
<213> Artificial sequence

<220>
<223> oligonucleotide

<400> 7
gctggcaggc gtaacact

18

<210> 8
<211> 21
<212> DNA
<213> Artificial sequence

<220>
<223> oligonucleotide

<400> 8
cggtttgagg agttgtagaa g

21

<210> 9
<211> 18
<212> DNA
<213> Artificial sequence

<220>
<223> oligonucleotide

<400> 9
cgtcttgaac cacacagc

18

<210> 10
<211> 18
<212> DNA
<213> Artificial sequence

<220>
<223> oligonucleotide

<400> 10
gcaaagtctc cctccctc

18

<210> 11
<211> 18
<212> DNA
<213> Artificial sequence

<220>
<223> oligonucleotide

<400> 11
ccagggtaga ggaaacaa

18

<210> 12
<211> 18
<212> DNA
<213> Artificial sequence

<220>
<223> oligonucleotide

<400> 12
tcgaagaaga ccgctggc

18

<210> 13
<211> 19

<212> DNA
<213> Artificial sequence

<220>
<223> oligonucleotide

<400> 13
aagatgaagg aaatgagtg

19

<210> 14
<211> 18
<212> DNA
<213> Artificial sequence

<220>
<223> oligonucleotide

<400> 14
catcttttct ggtctcggt

18

<210> 15
<211> 18
<212> DNA
<213> Artificial sequence

<220>
<223> oligonucleotide

<400> 15
ggaccaaggg caagtaag

18

<210> 16
<211> 18
<212> DNA
<213> Artificial sequence

<220>
<223> oligonucleotide

<400> 16
agccccatcct cctctgtg

18

<210> 17
<211> 20
<212> DNA
<213> Artificial sequence

<220>
<223> oligonucleotide

<400> 17
aatgacaata tctgagactc

20

<210> 18
<211> 18
<212> DNA
<213> Artificial sequence

<220>
<223> oligonucleotide

<400> 18
accacattctttagcctc

18

<210> 19
<211> 19
<212> DNA
<213> Artificial sequence

<220>
<223> oligonucleotide

<400> 19
ctttgactctt gttctcggt

19

<210> 20
<211> 18
<212> DNA
<213> Artificial sequence

<220>
<223> oligonucleotide

<400> 20
gttgtcagtt tctccggcc

18

<210> 21
<211> 20
<212> DNA
<213> Artificial sequence

<220>
<223> oligonucleotide

<400> 21
tcaaggcggat aagagtact

20

<210> 22
<211> 18
<212> DNA

<213> Artificial sequence

<220>

<223> oligonucleotide

<400> 22

ctcgccggg ttaatgct

18

<210> 23

<211> 18

<212> DNA

<213> Artificial sequence

<220>

<223> oligonucleotide

<400> 23

ggagcgattt gtctggtt

18

<210> 24

<211> 18

<212> DNA

<213> Artificial sequence

<220>

<223> oligonucleotide

<400> 24

tgtatgactcg cgcttact

18

<210> 25

<211> 18

<212> DNA

<213> Artificial sequence

<220>

<223> oligonucleotide

<400> 25

ggagcgattt gtctggtt

18

<210> 26

<211> 18

<212> DNA

<213> Artificial sequence

<220>

<223> oligonucleotide

<400> 26

tgtatgactcg cgcttact

18

<210> 27
 <211> 264
 <212> DNA
 <213> Artificial sequence

<220>
 <223> transit peptide encoding sequence

<220>
 <221> CDS
 <222> (1)..(264)

<400> 27
 atggcttct ctatgtctc ttccgctact atggttgcct ctccggctca ggccactatg 60
 gtcgctcctt tcaacggact taagtccctc gtcgccttcc cagccaccccg caaggctaac 120
 aacgacatta cttccatcac aagcaacggc ggaagagttt actgcattgca ggtgtggcct 180
 ccgatggaa agaagaagtt tgagactctc tcttaccttc ctgacccttac cgattccggt 240
 ggtcgcggtca actgcattgca ggcc 264

<210> 28
 <211> 88
 <212> PRT
 <213> Artificial sequence

<220>
 <223> transit peptide sequence

<400> 28

Met	Ala	Ser	Ser	Met	Leu	Ser	Ser	Ala	Thr	Met	Val	Ala	Ser	Pro	Ala
1				5					10					15	

Gln	Ala	Thr	Met	Val	Ala	Pro	Phe	Asn	Gly	Leu	Lys	Ser	Ser	Ala	Ala
				20				25					30		

Phe	Pro	Ala	Thr	Arg	Lys	Ala	Asn	Asn	Asp	Ile	Thr	Ser	Ile	Thr	Ser
				35				40				45			

Asn	Gly	Gly	Arg	Val	Asn	Cys	Met	Gln	Val	Trp	Pro	Pro	Ile	Gly	Lys
				50			55			60					

Lys	Lys	Phe	Glu	Thr	Leu	Ser	Tyr	Leu	Pro	Asp	Leu	Thr	Asp	Ser	Gly
65					70				75				80		

Gly	Arg	Val	Asn	Cys	Met	Gln	Ala								
				85											

<210> 29
 <211> 174
 <212> DNA
 <213> Artificial sequence

 <220>
 <223> transit peptide encoding sequence

 <220>
 <221> CDS
 <222> (1)..(174)

 <400> 29
 atggcttcct ctagctctc ttccgctact atggttgcct ctccggctca ggccactatg 60
 gtcgctcctt tcaacggact taagtccctcc gtcgccttcc cagccacccg caaggctaac 120
 aacgacattn cttccatcac aagcaacggc ggaagagttt actgcatttca ggcc 174

<210> 30
 <211> 58
 <212> PRT
 <213> Artificial sequence

 <220>
 <223> transit peptide sequence

 <400> 30

Met	Ala	Ser	Ser	Met	Leu	Ser	Ser	Ala	Thr	Met	Val	Ala	Ser	Pro	Ala
1															15
				5											

Gln	Ala	Thr	Met	Val	Ala	Pro	Phe	Asn	Gly	Leu	Lys	Ser	Ser	Ala	Ala
				20											30

Phe	Pro	Ala	Thr	Arg	Lys	Ala	Asn	Asn	Asp	Ile	Thr	Ser	Ile	Thr	Ser
				35			40								45

Asn	Gly	Gly	Arg	Val	Asn	Cys	Met	Gln	Ala						
				50		55									

<210> 31
 <211> 294
 <212> DNA
 <213> Arabidopsis thaliana

 <400> 31
 tcatttctca tcataacaaa gagagagaaa aaaactatgg aattgacact gaattcctcg 60
 agttctctta tcaaacctaa agatgcctaa agttcttagaa accaagaaaat ttcctccaa 120
 aacatgacct ttgcgtttttt gaaaggccca acatatcgtt tccaaaggaaa gaaactcggtt 180

aaggaaatga agttcaactca cgagaagacc ttcacgccag aaggtgaaac ctttgagaaa 240
tgggagaagc tccacgttct ctcataccca cactccaaga acgacgctag cgtt 294

<210> 32
<211> 86
<212> PRT
<213> Arabidopsis thaliana

<400> 32

Met Glu Leu Thr Leu Asn Ser Ser Ser Ser Leu Ile Lys Arg Lys Asp
1 5 10 15

Ala Lys Ser Ser Arg Asn Gln Glu Ser Ser Ser Asn Asn Met Thr Phe
20 25 30

Ala Lys Met Lys Pro Pro Thr Tyr Gln Phe Gln Ala Lys Asn Ser Val
35 40 45

Lys Glu Met Lys Phe Thr His Glu Lys Thr Phe Thr Pro Glu Gly Glu
50 55 60

Thr Leu Glu Lys Trp Glu Lys Leu His Val Leu Ser Tyr Pro His Ser
65 70 75 80

Lys Asn Asp Ala Ser Val
85